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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/788,639

02/27/2004

Per-Ola Kristensson

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05/02/2008

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EXAMINER

LEE, JOHN W

ART UNIT

PAPER NUMBER

2624

NOTIFICATION DATE

DELIVERY MODE

05/02/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptoboca@focusnip.com

Office Action Summary	Application No. 10/788,639	Applicant(s) KRISTENSSON ET AL.	
	Examiner JOHN Wahnkyo LEE	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38 and 40-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 February 2008 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-15, 17-27, 37-38 and 40-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Kristensson ("Design and Evaluation of a Shorthand Aided Soft Keyboard").

Regarding claim 1, Kristensson discloses a method of recognizing words (chapter 3.6, "SHARK system"), comprising: defining word patterns of a plurality of known words by a plurality of paths (chapter 3.7.1, "word level gestures"; Appendix D), wherein each path connects elements in a word on a virtual keyboard (chapter 3.7.1, "spatial relations with the individual characters position on the keyboard"), wherein the virtual keyboard contains a set of characters forming elements in the word without

temporary target letters being placed adjacent to a current stroke location (chapter 3.7.1, “do not contain ... reproduce an exact pattern on the keyboard”); accepting a stroke as an input on the virtual keyboard layout (chapter 3.7.1, “... shorthand gestures ... keyboard”); and recognizing a word pattern by processing the stroke using a combination of a plurality of channels (chapter 6.1.2, “partial location dependence; chapter 4, “shape”) that selectively process different aspects of the stroke in relation to the plurality of the paths on the virtual keyboard (chapter 3.7.1, “spatial relations with the individual characters position on the keyboard”).

Regarding claim 2, Kristensson discloses wherein the plurality of channels comprising shape information (chapter 4, “shape”).

Regarding claim 3, Kristensson discloses wherein the plurality of channels comprising location information (chapter 6.1.2, “partial location dependence”).

Regarding claim 4, Kristensson discloses wherein the plurality of channels comprising a tunnel model channel (Appendix B; Figure B-2, “notepad GUI”).

Regarding claim 5, Kristensson discloses wherein the plurality of channels comprising a language context channel (Appendix D).

Regarding claim 6, Kristensson discloses wherein recognizing the word pattern using shape information comprising template matching (chapter 4.1.1, “prototype”).

Regarding claim 7, Kristensson discloses wherein recognizing the word pattern using shape information comprising feature extraction (chapter 4.1.1, “prototype space” and “prototype feature vectors”).

Regarding claim 8, Kristensson discloses wherein recognizing the word pattern using location information comprises using location matching (chapter 4.2.2.1, “elastic matching of two curves”).

Regarding claim 9, Kristensson discloses wherein location matching comprises weighting sampling points of location from beginning to end (chapter 4.3.1, equations (4.10) and (4.11), “Euclidean distance”).

Regarding claim 10, Kristensson discloses wherein a tunnel of the word pattern comprising a predetermined width on either side of a set of virtual keys representing a set of letters of the word on a virtual keyboard (Appendix B; Figure B-2, “notepad GUI”).

Regarding claim 11, Kristensson discloses wherein recognizing the word pattern using the tunnel model channel comprises traversing keys passed by the word pattern and identifying potential word candidates by partial string matching (Appendix B; Figure B-2, “notepad GUI”).

Regarding claim 12, Kristensson discloses wherein recognizing the word pattern using the tunnel model channel comprises transforming a tunnel and a gesture passing the tunnel (Appendix B; Figure B-2, “notepad GUI”).

Regarding claim 13, Kristensson discloses wherein recognizing the shape comprising recognizing a difference between a user's gesture trace and an ideal template of the pattern (chapter 4.4, “Recognition Engine”; Appendix C, “Recognizer”).

Regarding claim 14, Kristensson discloses further comprising displaying the difference between the user's gesture trace and the ideal template of the pattern by

morphing the user's gesture trace to the ideal template (chapter 4.2.2.1, "elastic matching of two curves").

Regarding claim 15, Kristensson discloses wherein the word letters comprise letters from an alphabet of any of a natural language or an artificial language (Appendix B; Figure B-2, "notepad GUI").

Regarding claim 17, Kristensson discloses further comprising analyzing the stroke to differentiate between a tapping and a shorthand gesture input (chapter 3.7.3, "novice" and "expert").

Regarding claim 18, Kristensson discloses further comprising comparing a normalized word pattern and a normalized gesture trace and sampling the normalized word pattern and gesture trace to a fixed number of a plurality of points; and measuring the plurality of points relative to each other (chapter 4.2.2.1, "elastic matching of two curves"; chapter 4.3.1, equations (4.10) and (4.11), "Euclidean distance"; chapter 4.4.1; Figure 4-12, "normalization").

Regarding claim 19, Kristensson discloses comprising comparing a feature vector of the gesture trace and the feature vector of a word pattern (chapter 4.1.1, "prototype space" and "prototype feature vectors").

Regarding claim 20, Kristensson discloses further comprising inputting at least one letter of a word by tapping the letter (chapter 3.7.3, "novice" and "expert").

Regarding claims 21-25, claims 21-25 are analogous and correspond to claims 1-5, respectively. See rejections of claims 1-5 for further explanation.

Regarding claim 26, claim 26 is analogous and corresponds to claims 2-5. See rejection of claims 2-5 for further explanation.

Regarding claim 27, claim 27 is analogous and corresponds to claim 15. See rejection of claim 15 for further explanation.

Regarding claims 37, claim 37 is analogous and corresponds to claim 1. See rejection of claim 1 for further explanation.

Regarding claims 38 and 40-41 are analogous and correspond to claims 2 and 4-5, respectively. See rejection of claims 2 and 4-5 for further explanation.

Regarding claims 42, claim 42 is analogous and corresponds to claims 2-5. See rejections of claims 2-5 for further explanation.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristensson ("Design and Evaluation of a Shorthand Aided Soft Keyboard") in view of Carman, II (US 5,454,046).

Regarding claim 16, Kristensson discloses all the claim limitations of the previous

claim except the claim limitation of claim 16. However, Carman discloses that an abbreviated Chinese handwritten entry can be trained for recognition (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Carman's invention in Kristnesson's invention to provide handwritten data readable and reproducible by the computer as suggested by Carman (col. 2, lines 20-23).

Regarding claim 28, claim 28 is analogous and corresponds to claim 16. Refer rejection of claim 16 for further explanation.

6. Claims 29-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristensson ("Design and Evaluation of a Shorthand Aided Soft Keyboard") in view of Milewski et al. ("Medical Word Recognition Using a Computational Semantic Lexicon").

Regarding claim 29, Kristensson discloses all the claim limitations of the previous claim except the claim limitation of claim 29. However, Milewski teaches a recognition method for pattern recognition involving lexicon (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Milewski's method in Niemeier's invention to provide a hybrid semantic network as suggested by Milewski (page 402).

Regarding claims 30 and 36, Milewski further teaches that the recognition method deals with medical forms that contain lots of medical words (pages 401-402).

Regarding claim 31, Milewski further teaches that a lexicon database will contain a list of English and medical words which are weighted according to the popularity of that word over time (page 402).

Regarding claim 32, Milewski further teaches that a priori data will be used for further recognition in the larger handwriting regions (page 402).

Regarding claim 33, Milewski further teaches a recognition method for pattern recognition of the medical field (abstract).

Regarding claim 34, Milewski further teaches a data complier, a graphic user interface (GUI), and a Java Constrained Object Inference Net (page 402).

Regarding claim 35, Milewski further teaches that the objective and comments region contain lots of varying abbreviations, symbols, and numbers in conjunction with regular handwriting, and a general path can be used to narrow in on specific problems (page 402).

Conclusion

7. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN Wahnkyo LEE whose telephone number is (571)272-9554. The examiner can normally be reached on Monday - Friday (Alt.) 7:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/

Supervisory Patent Examiner, Art Unit 2624

/John Wahnkyo Lee/

Examiner, Art Unit 2624

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